OIL INDIA LIMITED
(A Government of India Enterprises)
PO : Udayan Vihar , Guwahati – 781171
Assam (India)

TELEPHONE NO. (91-361) 2594287
FAX NO: (91-361 2643686)
Email: aparajita@oilindia.in ; erp_mm@oilindia.in

INVITATION TO e-BID UNDER SINGLE STAGE TWO BID SYSTEM

Tender No & Date	: **SGI9878P14 of 18/05/2013**
Tender Fee	: Rs 1,000.00
Bid Security Amount	: Rs 85,000.00
Bidding Type	: SINGLE STAGE TWO BID SYSTEM
Bid Closing on	: As mentioned in the Basic Data of e-portal
Bid Opening on	: -do-
Performance Guarantee	: Applicable
Integrity Pact	: Applicable

OIL invites Bids for **Solar Photovoltaic Power Plant** through its e-Procurement site under **SINGLE STAGE TWO BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions.. The details of items tendered can be found in the Item Data and details uploaded under Technical RFX.

The tender will be governed by:

a) "General Terms & Conditions" for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders and Amendment No. 1 to General Terms and Conditions for Indigenous E-Tender.

b) Technical specifications and Quantity as per **Annexure – 1A**.

c) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area - > Tender Documents.

d) In the event of receipt of only a single offer against the tender within B.C. date, OIL reserves the right to extend the B.C. date as deemed fit by the Company. During the extended period, the bidders who have already submitted the bids on or before the original B.C. date, shall not be permitted to revise their quotation.

e) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).

f) Bidder are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) given in MS excel format in Technical RFx -> External Area - > Tender Documents. The above filled up document to be uploaded in the Technical RFX Response.

Special Note:

1.0 General Qualification Criteria:

In addition to the general BRC/BEC, following criteria on Bidders' Experience and their financial capabilities shall be considered **(documentary evidence to be provided along with the bid in** Technical RFx -> External Area - > Tender Documents**)** as on the Bid Closing Date:

i). Successful execution of a single order of value not less than 42.50 Lakhs for supply of similar items during last three years .

ii). Annual turnover of the firm in any of the last three financial years or current financial year should be more than 85.00 Lakhs.

2.0 Application showing full address/email address with Tender Fee (Non-refundable) of Rs. 1,000.00 in favour of M/s Oil India Limited and payable at Guwahati is to be sent to Chief Material Manager , Oil India Limited (Pipeline Headquarter), P.O. Udayan Vihar, Guwahati - 781171. Application shall be accepted only upto one week prior to Bid Closing date. The envelope containing the application for participation should clearly indicate "REQUEST FOR ISSUE OF USER ID AND PASSWORD FOR E TENDER NO …" for easy identification and timely issue of user ID and password. On receipt of requisite tender fee, USER_ID and initial PASSWORD will be communicated to the bidder (through e-mail) and will be allowed to participate in the tender through OIL's e- Procurement portal. No physical tender documents will be provided. Details of NIT can be viewed using "Guest Login" provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL's web site www.oil-india.com.

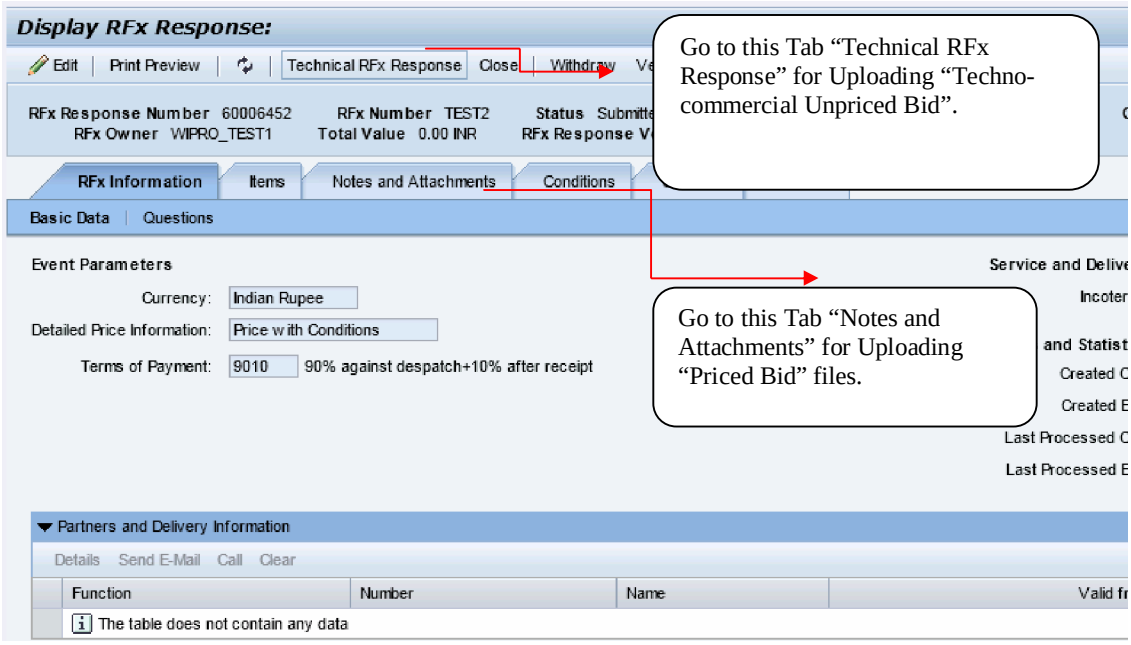
NOTE: PSUs and SSI units are provided tender documents Free of Cost (as per govt guidelines), however they have to apply to OIL's designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.

3.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidders are required to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" through electronic format in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

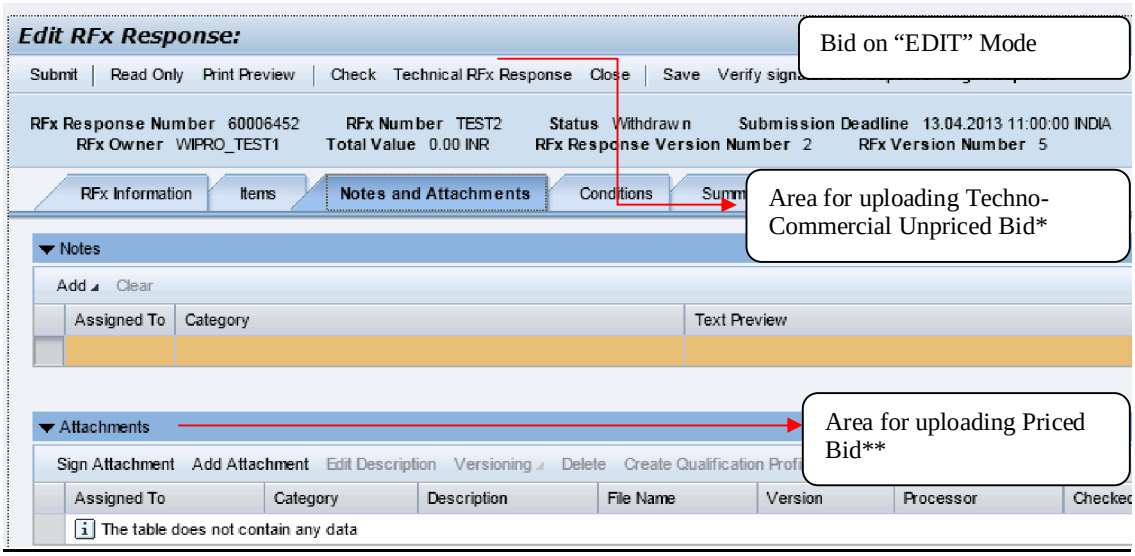
3.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response-> User - > Technical Bid only**.** The "**TECHNO-COMMERCIAL UNPRICED BID**" shall contain all techno-commercial details **except the prices**. **Please note that no price details should be uploaded in** Technical RFx Response**.**

3.2 The "**PRICE BID**" must contain the price schedule and the bidder's commercial terms and conditions.**The prices of the items should be quoted in "Conditions Tab". Details of prices as per Bid format / Commercial bid can be uploaded as Attachment under the attachment option under "Notes & Attachments".**

3.3 A screen shot in this regard is given below. Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in Annexure-CCC.



On "EDIT" Mode- The following screen will appear. Bidders are advised to Upload "Techno-Commercial Unpriced Bid" and "Priced Bid" in the places as indicated above:



Note :

* The "Techno-Commercial Unpriced Bid" shall contain all techno-commercial details **except the prices**.

** The "Price bid" must contain the price schedule and the bidder's commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock on OK to save the File.

4.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with **Tender no.** and **Due date** to **Chief Material Manager , Oil India Limited (Pipeline Headquarter), P.O. Udayan Vihar, Guwahati - 781171** on or before the Bid Closing Date and Time mentioned in the Tender.

a) Original Bid Security
b) Detailed Catalogue (if any)
c) Any other document required to be submitted in original as per tender requirement

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

5.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

6.0 All the Bids must be Digitally Signed using "Class 3" digital certificate with Organisation's name *(e-commerce application)* as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3 with Organisation's Name" digital certificate, will be rejected.

7.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

8.0 Bid must be submitted electronically only through OIL's e-procurement portal. Bid submitted in any other form will be rejected.

9.0 **SINGLE STAGE TWO BID SYSTEM** shall be followed for this tender and only the PRICED-BIDS of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

10.0 **a) The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure-DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.**

b) The name of the OIL's Independent External Monitors at present are as under:

i) **SHRI N. GOPLASWAMI, I.A.S. (Retd.),**
Former Chief Election Commissioner of India
E-mail Id : gopalaswamin@gmail.com

ii) **SHRI RAMESH CHANDRA AGARWAL, IPS (Retd.)**
Former Director General of Police
E-mail Id : rcagarwal@rediffmail.com

11.0 The tender shall be governed by the Bid Rejection & Bid Rejection Criteria given in enclosed **Annexure-CCC**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-CCC**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/LOCAL/E-01/2005 for E-procurement (LCB Tenders) elsewhere, those in the BEC / BRC shall prevail.

12.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

13.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the NIT terms and conditions.

Yours Faithfully

Sd-
MS A GOGOI
SENIOR MANAGER MATERIALS
FOR : GENERAL MANAGER (PLS)

ANNEXURE-1A

TECHNICAL SPECIFICATIONS:

1 A. Solar Photo Voltaic Module (Crystalline)

1.1 The Solar PV module will be minimum of 200 Wp nominal rating.

1.2 Solar modules offered shall be certified as per latest edition of IEC 61215. The modules shall also qualify for IEC 61730 for safety qualification testing. For modules to be used in a highly corrosive environment throughout their lifetime they must qualify for IEC 61701.

1.3 SPV module shall contain mono/poly crystalline high power silicon solar cells. The solar cell shall have surface anti-reflective coating to help to absorb more light in all weather conditions.

1.4 The module frame shall be made of aluminium or corrosion resistant material, which shall be electrolytic ally compatible with the structural material used for mounting the modules.

1.5 Photo electrical conversion efficiency of SPV module shall not be less than 14%.

1.6 Fill factor of the module shall not be less than 0.70

1.7 Each module shall have low iron tempered glass front for strength & superior light transmission. It shall also have tough multi-layered polymer back sheet for environmental protection against moisture & provide high voltage electrical insulation.

1.8 Solar PV module shall be highly reliable, light weight and shall have a service life of more than 25 years.

1.9 The rated output of any supplied module shall not vary by more than 3% from the average power rating of all ratings. Each module, therefore, has to be tested and rating displayed.

1.10 It shall perform satisfactorily in relative humidity up to 95% and temperature between # 4.0°C and 85°C.It shall be able to withstand wind gusts up to 150 Km/hr.

1.11 The solar modules should have suitable encapsulation & sealing arrangements to protect the silicon cells from the environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules.

1.12 Bidder must consider Shading Losses as per the relevant Industry Standard & Practice while designing the proposed power plant Guarantee on power output of solar module will be as follows:

Guarantee on power output of solar module will be as follows:

End of Year	Guaranteed Output
1	98.5%
2	97.5%
3	97%
6	95.5%
8	94.5%
10	93.5%
15	91%
20	88.5%
25	86%

1.14 Marking: Each module shall carry the following clear and indelible markings:
- name, monogram or symbol of manufacturer;
- type or model number;
- serial number;
- polarity of terminals or leads (colour coding is permissible)
- maximum system voltage for which the module is suitable
- Date & place of manufacture;
- I-V Curve for the module.
- Wattage, Im, Vm &FF for the module

Module shall have type approval certificate as per Annexure-9. Bidder shall provide the data sheet as per Annexure - 10 A.

1B. Solar Photo Voltaic Module (Thin Film)
1.15 The Solar PV module will be minimum 30Wp nominal rating
1.16 Thin Film Solar modules offered shall be certified as per latest edition of IEC 61646.
1.17 The modules shall also qualify for IEC 61730 for safety qualification testing. For modules to be used in a highly corrosive environment throughout their lifetime they must qualify for IEC 61701. The safety class shall be UL 1703
1.18 SPV module shall contain amorphous silicon/microcrystalline solar thin film or shall be of Copper Indium Gallium Diselenide (CIGS). The thin film modules shall have surface coating to help to absorb more light in all weather conditions. The modules shall be able to perform well under weak light conditions (diffuse & reflective light)
1.19 The module frame shall be made of aluminium or corrosion resistant material, which shall be electrolytic ally compatible with the structural material used for mounting the modules .
1.20 Photo electrical conversion efficiency of Thin Film module shall not be less than 6.5%.
1.21 Fill factor of the module shall not be less than 0.6.
1.22 Each module shall have low iron tempered glass front for strength & superior light transmission. It shall also have back glass sheet for environmental protection against moisture & provide high voltage electrical insulation.

1.23 Solar PV module shall be highly reliable, light weight and shall have a service life of more than 25 years.
1.24 The rated output of any supplied module shall not vary by more than 3% from the average power rating of all ratings. Each module, therefore, has to be tested and rating displayed.
1.25 It shall perform satisfactorily in relative humidity upto 95% and temperature between #4°C and 85°C.It shall be able to withstand wind gusts of upto 150 Km/hr.
1.26 The solar modules should have suitable encapsulation & sealing arrangements to protect the it from the environment. The encapsulation arrangement shall ensure complete moisture proofing for the entire life of solar modules.
1.27 Bidder must consider Shading Losses as per the relevant Industry Standard & Practice while designing the proposed power plant.

Guarantee on power output of solar module will be as follows:

End of Year	Guaranteed Output
1	98.5%
2	97.5%
3	97%
6	95.5%
8	94.5%
10	93.5%
15	91%
20	88.5%
25	86%

1.29 Marking:
Each PV module used in any solar power project must use a RF identification tag. The following information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.) and also in clear and indelible markings:
- Name, monogram or symbol of manufacturer of PV module;
- Name, monogram or symbol of manufacturer of Solar cells;
- Type or model number;
- Unique Serial number and model number of the module;
- Polarity of terminals or leads (colour coding is permissible)
- Maximum system voltage for which the module is suitable;
- Date & place (country of origin) of manufacture (separately for PV module and solar cell)
- I-V Curve for the module;
- Wattage, Im, Vm &FF for the module;
- Name of the test lab issuing IEC certificate ;
- Other relevant information on traceability of solar cells and module as per ISO 9000;

The 20 KWP solar PV power plants shall have necessary equipment to continuously measure solar radiation, ambient temperature, wind speed and other weather parameters and simultaneously measure the generation of DC power as well as AC power generated from the plant.
Module shall have type approval certificate as per Annexure-9.

Bidder shall provide the data sheet as per Annexure 10 B.

2. Module Mounting Structure

2.1 The array structure shall be so designed that it will occupy minimum space without sacrificing the output from SPV panels.
2.2 Design drawings with material selected shall be submitted for prior approval of OIL.
2.3 The structure shall be designed to allow easy replacement of any module & shall be in line with the site requirements.
2.4 The array structure shall be made of hot dipped galvanized MS angles of suitable size.
2.5 The support structure design & foundation shall be designed to withstand wind speed upto 200 kmph using relevant Indian wind load codes.
2.6 The module alignment & tilt angle shall be calculated to provide the maximum annual energy output. This shall be decided based on the location of array installation.
2.7 All fasteners shall be of stainless steel of grade SS 304.
2.8 The array structure shall be grounded properly using maintenance free earthing kit.
2.9 Galvanized Steel Structural must be considered for all type of structural steel proposed for the power plant.
2.10 The mounting of solar modules shall be done on rooftop and entire Fabrication of elevated structure and the structure atop sloping roofs shall be done by the Bidder.

3. JUNCTION BOXES:
3.1 The array junction boxes shall be dust, vermin & waterproof & made of FRP/ABS plastic.
3.2 The Array Junction Box will also have suitable surge protection. The Junction Boxes shall have suitable arrangement for the followings:
a) Combine groups of modules into independent charging sub-arrays.
b) Provide arrangement for disconnection for each of the groups.
c) Provide a test point for each sub-group for quick fault location.
d) To provide group array isolation.
e) The current carrying rating of the Junction Boxes shall be suitable with adequate safety factor to inter connect the Solar PV array.

3.3 The junction boxes shall have suitable cable entry points fitted with cable glands of appropriate sizes for both incoming & outgoing cables.
3.4 Suitable markings shall be provided on the bus bar for easy identification & cable ferrules shall be fitted at the cable termination points for identification.

4. POWER CONDITIONING UNIT (PCU)
PCU shall supply the DC energy produced by array to DC bus for inverting to AC voltage using its MPPT (Maximum Power Point Control) control to extract maximum energy from solar array and produce 400 V AC, 3 phase, 50 Hz to feed the LT panels.

4.1 MPPT controller, inverter and associated control and protection devices etc. all shall be integrated into PCU.
4.2 The rating of PCU shall be suitable to the capacity offered
4.3 PCU shall provide 3 phase, 400+/-5% V, 50+/- 1.5 Hz supply on AC side with THD<3%.
4.4 DC voltage ripple content shall not be more than 3%.
4.5 Efficiency of PCU shall not be less than 97%.
4.6 Degree of protection should not be less than IP-21
4.7 It shall have protection features such as over voltage, short circuit, over temperature etc.
4.8 The inverter shall be efficient based on MPPT with IGBT reliable power based design.
4.9 The system should be capable of providing all the data including that of meter and PCU to the Master Control at Pipeline Headquarters,OIL, Guwahati through existing OFC Infrastructure and wireless link on relevant BIS/IEC protocol. All the equipments /hardware /software for complying to the same will be in the bidder’s scope. The PCU shall be capable of complete automatic operation, including wake-up, synchronization & shut down. It must be capable of initiating DG set START command in existing sequence when SPV system unable to meet the load demand and initiate DG Set STOP command when SPV system ready/able to take the load. Suitable manual control both from local control desk and Remote Master Control desk shall be incorporated in the system.

4.10 PCU shall have facility to display basic parameters of the system.
4.11 Built-in with data logging to remotely monitor plant performance through external PC shall be provided
4.12 PCU shall be DSP control and shall operate in Sleeping mode when there will no power connected.
4.13 PCU shall operate seamlessly without being effected on any power cut to the load.
4.14 PCU shall off- grid in nature but capable of initiating DG set START command in existing sequence when SPV system unable to meet the load demand and initiate DG Set STOP command when SPV system ready/able to take the load. Suitable manual control both

from local control desk and Remote Master Control desk shall be incorporated in the system.
4.15 PCU to be communicable on remote sensing.
Indications (through LEDs & LCD display)
Inverter ON
LOAD ON ,
Inverter under voltage/over voltage
Inverter over load
Inverter over temperature.
Protections:
Over voltage both at input & output
Over current both at input & output
Over/under frequency
Over temperature
Short circuit
Protection against lightening
Surge voltage induced at output due to external source.
Bidder shall provide the data sheet as per Annexure # 10C

Typical Technical Features shall be as follows:

Parameters	**Value**
Continuous Output Power Rating	To suit the Capacity of the proposed Plant
AC voltage	3phase 400V, +/-5%
Frequency	50Hz
Waveform	Sine wave
PV entries	2
Minimum Efficiency	97 %
Ambient temperature range	0-45^{o}C
Total Harmonic Distortion	< 3%
Degree of protection	IP21
Nominal Voltage and Frequency	400 V/ 3 Phase/ 50 Hz
Frequency Tolerance	+/-3%
Voltage Tolerance	+15% and – 10%

4.15 Typical failure analysis report of PCUs and recommended list of critical components shall be provided by the bidder while submitting their offer.

4.16 Provision shall be available in the PCU for remote monitoring through suitable wireless mode of following parameters
DC power input
DC input voltage
DC current
AC power output
AC voltage (all the 3 phases and line)
AC current (all the 3 phases and line)
Power factor

In addition to the above, energy values to be displayed
* The number of PCUs is indicative only. The bidder may design the system to extract maximum
efficiency with inbuilt redundancy.

5. Batteries:
The batteries shall be capable of providing minimum Two (2) days autonomy. The batteries should qualify IEC 61427, IS 1651, IS 13369 or IS 15549 whichever is applicable.

6. DC distribution board (DCDB)
DC distribution board shall be provided in between solar array and PCU. It shall have MCCB of suitable rating for connection and disconnection of array section. It shall have meters for measuring the array voltage and array current. DCDB can also be integrated into PCU for space saving.

7. AC Distribution:
Power conditioning unit installed in a control room converts DC energy produced by the solar array to AC energy. The AC power output of the inverter shall be fed to the AC Distribution Board (metering panel & isolation panel) which also houses energy meter.

8. Cables and Hardwares
Cables of appropriate size to be used in the system shall have the following characteristics:
Will meet IS 694/1554 standards
Temp. Range #10oC to +80oC.
Voltage rating 660/1000V
excellent resistance to Heat, Fire, oil, cold, water, abrasion, UV radiation
Flexible
Cabling on DC side of the system shall be as short as possible to minimize the voltage drop in the wiring. Components and hardware shall be vandal and theft resistant. All parts shall be corrosion-resistant. The system description, general/technical requirements etc. are given for general guidance only. The supplier/manufacturer shall submit the detail design of the complete solar generating system by using their software to optimize the combination of modules considering the specific location, isolation, nature of load etc.

9. ENERGY METER
9.1 A smart Energy Meter shall be provided as approved by the OIL to measure the delivered quantum of energy.
9.2 Meter must be provided with the necessary data cables.
9.3 Energy Meter should be import/export type ABT compliant, 0.5 Class of accuracy.

10.0 The Balance of System (BoS) items / components of the SPV power plants must conform to MNRE specification for off grid solar project.

11.0 AUTHORIZED TESTING LABORATORIES/ CENTERS
11.1 The PV modules must be tested and approved by one of the IEC authorized test centers. Test certificates can be from any of the National Accreditation Board for Testing and Calibration Laboratories (NABL)/ BIS Accredited Testing / Calibration Laboratories.
11.2 The inverters must be tested and approved by one of the IEC authorized test centers. Test certificates can be from any of the authorized laboratories viz. Electronics Regional Test Laboratory (ERTL (East)), CPRI (Bangalore), ERTL (West) and ERTL (North).
11.3 The batteries must be tested and approved by one of the IEC authorized test centers. Test certificates can be from any of the authorized laboratory viz. ERTL (East), Semi Lab Kolkata, CECRI Chennai, CPRI (Bangalore) ERTL (North), and SEC.
11.4 Test certificates for the BoS items/ components can be from any of the NABL/ BIS Accredited .Testing-Calibration Laboratories/ MNRE approved test centers.

12. Civil Work Specification
12.1 Concreting
Concrete mix shall be of M-20/M-25 grade for pedestal and earth pit chambers.
Pedestal base shall be provided with tapered gola using water proofing compound of IS-2649.
CC work shall be done over the entire Array area.
Curing of all concrete work shall be carried out continuously for minimum of 7days.

12.2 Array layout:
Contractor shall design the array layout by incorporating following dimensions:
Minimum 750mm space around the periphery wall of rooftop.
Minimum 900mm space near the rain water exhaust pipe, water tank and rooftop entrance.
12.3 Stair case:
Contractor shall provide a GI stair case for grid rooftop of following specifications.
a. Base channel -110X50mm.
b. Hand rail pipe -50mm dia.
c. Distance between Steps -300mm.
d. Steps angle -110X110mm.
12.4 Structural design:
IS 800-2007 shall be followed for structural design. Contractor shall submit the DBR and STADD calculations along with the structural design.
12.5 Control Room:

The contractor shall design the control room as per the relevant IS, CEA & manufacturer's recommendations/standards. Accommodation of following equipments/facilities shall be considered while designing the control room

Electrical Panel
Battery Bank
Sitting area for operators if required.

13.0 Plant Protections

13.1 Lightning & Over Voltage Protection

SPV Power Plants will be provided with Lightning and over voltage Protection connected to proper earth mats.
The Lightning conductors shall be provided as per Indian Standards (IS) in order to protect the entire Solar Array yard from Lightning strikes.
Necessary concrete foundation for holding the lighting conductor in position will be made after giving due consideration to maximum wind speed.
Lighting conductors shall be earthed through flats and connected to earth mats as per applicable IS with earth pits.
The pits are provided with Masonry enclosure with cast iron cover plate having locking arrangement, watering pipe using charcoal and salt as per IS.

13.2 Grounding

The complete Solar PV power Plant with all its accessories will be grounded, so that in the event of a lightning strike or utility over voltage, current will find a safe path to earth. Note that a separate grounding would be provided for this purpose, separate from the one used for lightning conductor.
Each Solar PV array structure shall be grounded properly as per IS standard.
The earth conduction shall run through appropriate pipes partly buried and partly on the surface of the control room building. The complete earthing system shall be mechanically & electrically connected to provide independent return path to earth.

Annexure 9: Quality Testing of PV Module

Quality Testing of PV-Module

Modules used in crystalline PV solar panels shall have IEC 61215 compliance certificate. The qualification testing procedure is defined in IEC 61215 to examine the impact of mechanical, thermal & electrical stress on power output. The bidder shall submit appropriate type approval certificate for the offered solar modules from IEC approved laboratory. Similarly Thin Film Solar panels shall be IEC 61646 compliant

Method of Testing:

1. Visual Inspection:
Each module shall be carefully inspected under an illumination of not less than1000 lux
for the following conditions:
a. Cracked, bent, misaligned or torn external surfaces.
b. broken / cracked cells
c. faulty interconnections or joints;
d. cells touching one another or the frame;
e. failure of adhesive bonds; bubbles or de-laminations forming a continuous path
f. between a cell & edge of the module;
g. faulty terminations, exposed live electrical parts
h. Junction box should have common terminals with suitable bypass diode for preventing hot spot problem.

2. Performance at STC: (As per IEC 61215:2005 & IEC61646)
The current-voltage characteristics of the module shall be determined in accordance with IEC 60904-1 at a specific set of irradiance & temp conditions.
Performance of PV-Module shall be generally evaluated at Standard-Test-Conditions (STC) as defined in IEC 60904 standards:
cell temp of 25° C,
incident solar irradiance of 1000W/m2,
spectral distribution of light spectrum with an air mass AM=1.5

3. Dry Heat test (As per IEC) - at 85°#± 2° C for 16 hours.

4. Cold Test (As per IEC): -40° ± 3° C for 16 hours.

5. Rapid change of temperature (As per IEC):
Module shall be exposed alternately for 30 minutes to hot chamber at 80°C#± 2°C & to cold chamber at #40°C. Ten such cycles shall be carried out.

6. Composite temp/humidity test (As per IEC):
Test shall be carried out as mentioned in IEC specification.

7. Acceptance Criteria:

The Module is deemed to have passed the tests if the sample meets the following criteria:
a. There is no evidence of a major visual defect such as a cracked or broken window, bubbles or de-lamination in the encapsulant etc.
b. There are no cell breakages & no water infiltration into terminal boxes.
c. No sample exhibits any open circuit or ground fault.
d. No visible evidence of major defects that may affect the performance of the module.

e. Insulation Resistance not less than 50M-ohm at 500 V DC.
f. Degradation of performance may not exceed 5% after each single test or 8% after the whole sequence.

Annexure 10 A: Solar Module Data Sheet (Crystalline PV)

Parameters	**Required**	**Offered**
PV Module Manufacturer name & Country	To be mentioned	
PV Module type	Multi/Mono crystalline	
No. of PV cells per Module		
Solar module frame material	Anodized Aluminum	
Module dimensions	To be mentioned	
Module weight	To be mentioned	
Output cables	Polarized weatherproof DC rated multicontact Connectors	
Junction Box	Weather resistant HDPE (IP65)	
Construction	Front: High transmission tempered glass, Back: Polyester Encapsulant EVA	
Max. Temperature rise of solar cells under severe working conditions over Max. Ambient Temp.	To be mentioned	
Nominal voltage	To be mentioned	
Nominal Wattage	To be mentioned	
Power Tolerance	±3%	
Peak power voltage (Vmp)	To be mentioned	
Peak Power current (Imp)	To be mentioned	
Open circuit voltage (Voc)	To be mentioned	
Short circuit current (Isc)	To be mentioned	
Weight of each module	To be mentioned	
Fill Factor	0.7	
Temperature coefficient of Isc	(0.065 ±0.015)%/ ^{o}C	
Temperature coefficient of Voc	-(160 ±20)mV/ ^{o}C	
Temperature coefficient of power	-(0.5 ±0.05)%/ ^{o}C	
Maximum system voltage	600/1000V	
Maximum series fuse rating		
NOCT (Air 20 oC, Sun 0.8kW/m2, Wind 1m/s)	47±2 ^{o}C	
Standards / Approvals from International Agencies	IEC 61215/ IEC 61730, TUV, UL	

Temperature cycling range	-40 ^{o}C to +85 ^{o}C	
Humidity	85% RH	
Static load (front and back)	2400 pascals	
Hailstone impact	25mm at 23m/s	

Annexure 10 B: Solar Module Data Sheet (Thin Film PV)

Parameters	**Required**	**Offered**
PV Module Manufacturer name & Country	To be mentioned	
PV Module type	Thin Film Amorphous Silicon/micro crystalline/ Copper Indium Gallium Diselenide (CIGS).	
No. of PV cells per Module matrix		
Solar module frame material	Frameless	
Module dimensions	To be mentioned	
Module weight	To be mentioned	
Output cables	Polarized weatherproof DC rated multicontact Connectors	
Junction Box	Weather resistant HDPE (IP65)	
Construction	Front: High transmission tempered glass, Back: Polyester Encapsulant EVA	
Max. Temperature rise of solar cells under severe working conditions over Max. Ambient Temp.	To be mentioned	
Nominal voltage	To be mentioned	
Nominal Wattage	To be mentioned	
Power Tolerance	±3%	
Peak power voltage (Vmp)	To be mentioned	
Peak Power current (Imp)	To be mentioned	
Open circuit voltage (Voc)	To be mentioned	
Short circuit current (Isc)	To be mentioned	
Weight of each module	To be mentioned	
Fill Factor	Atleast 0.6 (higher shall be preferred).	
Temperature coefficient of Isc	(0.09)%/ ^{o}C	
Temperature coefficient of Voc	-(0.33) mV/ ^{o}C	

Temperature coefficient of power	-(0.2)%/ ^{o}C	
Maximum system voltage	600/1000V	
Maximum series fuse rating	15 A	
NOCT (Air 20 oC, Sun 0.8kW/m2, Wind 1m/s)	47±2 ^{o}C	
Standards / Approvals from International Agencies	IEC 61646/ IEC 61730, TUV, UL	
Temperature cycling range	-40 ^{o}C to +85 ^{o}C	
Humidity	85% RH	
Static load (front and back)	2400 pascals	
Hailstone impact	To be mentioned	

Annexure 10C: Power Conditioning Unit (PCU)

Parameters	**Required**	**Offered**
Make	Reputed Manufacturers like SMA,ABB etc.	
Nominal Output Voltage	230/415 volts ±1% three phase, 4 Wire output. Nominal voltage shall be adjusted by ±10% via system set points	
Output Frequency	50Hz ± 0.5% Inverter to follow grid frequency up to ±3Hz of the nominal output frequency during normal operation	
Continuous Rating	To be mentioned	
Max DC Link Voltage Range	To be mentioned	
MPPT Range	To be mentioned	
Control Type	Voltage source, microprocessor assisted output regulation	
Waveform	DSP/Microcontroller generated PWM for low THD, sinewave output	
Parallel Operation Power Control	Phase Controlled Pulse Width Modulation (PWM)	
THD	Less than 3%	
Efficiency	=94%	
Internal Protection System (using electronic detection)	Inverter continuous overload protection • Inverter peak current (short circuit) protection • Heatsink over temperature protection • Over/under voltage AC voltage protection	

Parameters	Required	Offered
	• Over/under frequency protection • Anti islanding protection	
Alarm Signals	Via system fault relay (voltage free contact)	
Front Panel Display (LCD)	40x4 LCD panel with membrane keypad displaying the following: • Inverter per phase voltage, current, kW, kVA and frequency • System voltage and frequency • Inverter on line status • PV panel voltage • Solar charge current and ambient temperature • Individual power stage heat sink and cabinet temperature • Solar radiation • Inverter import & export kWh summation • Solar kWh • System set points and event logs	
Front Panel Controls (via keypad)	To be mentioned	
Front Panel Indicators	To be mentioned	
Circuit Breakers	Solar Input	
RFI	Designed to minimize both conducted and radiated RFI emissions	
Earthing Provisions	AC bypassing to earth on inverter and DC inputs	
ENVIRONMENTAL		
Operating Temperature Range	4-50 degrees Celsius	
Humidity	0-90% non condensing	
Enclosure	Rated for IP30 (indoor application)	
ENCLOSURE		
Dimensions	To be mentioned	
Weight	To be mentioned	
	Typical voltage tolerance: +15% and -90% for any two of the 3 phases +15% and -20% for the remaining phase	

Parameters	Required	Offered
	Typical frequency tolerance +/- 3Hz	
DATA LOGGING		
Communication Interface	RS232/RS485. Modbus/Profibus/Telephone Modem	
System Features	• Adjustable logging repetition from 1 sec to 900 seconds • Storage capacity of up to 3 year with 10 min logs • Time and date stamped log entries • Time and date annotated fault log, holding the fault description and operating statistics • View and change system setpoint configurations remotely • Bulk log download for data importation into a spreadsheet where applicable	
Logging Attributes	A summary of the data logging abilities to be supplied with the control system for instantaneous viewing and periodic logging are listed below: **SYSTEM SUMMATIONS** • Inverter import and export kWh • Solar kWh • Hours run **SYSTEM PARAMETERS** • Inverter volts, amps, kW, kVA, frequency **System volts and frequency** • Solar panel temperature • Ambient temperature • PV panel voltage • Solar charge current • Heat sink & cabinet temperatures • Solar radiation (with external pyranometer)	

REMOTE MONITORING & CONTROL :

#Details of Remote Network & Monitoring/Control Devices, Software etc.
Details of Desktop & Laptop PCs.

ANNEXURE X: SAFETY GUIDELINES

GENERAL HSE POINTS TO BE INCORPORATED IN THE CONTRACT

1. It will be solely the Contractor’s responsibility to fulfill all the legal formalities with respect to the Health, Safety and Environmental aspects of the entire job (namely; the person employed by him, the equipment, the environment, etc.) under the jurisdiction of the district of that state where it is operating. . All sub-contractors hired by him must comply with the same requirement as the contractor himself and shall be liable for ensuring compliance all HSE laws by the sub or sub-sub contractors.
2. Every person deployed by the contractor in a mine must wear safety gadgets to be provided by the contractor. The Contractor shall provide proper Personnel Protective Equipment as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule. Safety appliances like protective footwear, Safety Helmet and Full Body harness has to be DGMS approved. Necessary supportive document shall have to be submitted as proof. If the Contractor fails to provide the safety items as mentioned above to the working personnel, the Contractor may apply to the Company (OIL) for providing the same. OIL will provide the safety items, if available. But in turn, OIL will recover the actual cost of the items by deducting from Contractor's Bill. . However, it will be the Contractor#s sole responsibility to ensure that the persons engaged by him in the mines use the proper PPE while at work.

All the safety gears mentioned above are to be provided to the working personnel before commencement of the work.

3. The Contractor shall prepare written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with it/them. The SOP should clearly state the risk arising to men, machineries & material from the mining operation / operations to be done by the contractor and how it is to be managed.
4. The contractor shall provide a copy of the SOP to the person designated by the mine owner who shall be supervising the contractor's work.
5. Keep an up to date SOP and provide a copy of changes to a person designated by the Mine Owner/Agent/Manager.
6. Contractor has to ensure that all work is carried out in accordance with the Statute and SOP and for the purpose he may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a safe manner. For work of a specified

scope/nature, he should develop and provide to the mine owner a site specific code of practice in line.

7. All persons deployed by the contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards stating the name of the contractor and the work and its validity period, indicating status of MVT, IME & PME.

8. The contractor shall submit to DGMS returns indicating # Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons.

9. The return shall be submitted quarterly (by 10th of April, July, October & January) for contracts of more than one year. However, for contracts of less than one year, returns shall be submitted monthly.

10. It will be entirely the responsibility of the Contractor/his Supervisor/representative to ensure strict adherence to all HSE measures and statutory rules during operation in OIL#s installations and safety of workers engaged by him. The crew members will not refuse to follow any instruction given by company's Installation Manager / Safety Officer / Engineer / Official / Supervisor/Junior Engineer for safe operation.

11. Any compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be paid by the contractor only.

12. Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor.

13. The contractor shall have to report all incidents including near miss to Installation Manager / departmental representative of the concerned department of OIL.

14. The contractor has to keep a register of the persons employed by him/her. The contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.

15. If the company arranges any safety class / training for the working personnel at site (company employee, contractor worker, etc) the contractor will not have any objection to any such training.

16. The health check up of contractor's personnel is to be done by the contractor in authorized Health Centres as per OIL's requirement & proof of such test(s) is to be submitted to OIL. The frequency of periodic medical examinations should be every five years for the employees below 45 years of age and every three years for employees of 45 years of age and above.

17. To arrange daily tool box meeting and regular site safety meetings and maintain records.

18. Records of daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the contractor.
19. A contractor employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.
20. A contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.
22. Contractor's arrangements for health and safety management shall be consistent with those for the mine owner.
23. In case Contractor is found non-compliant of HSE laws as required company will have the right for directing the contractor to take action to comply with the requirements, and for further non-compliance, the contractor will be penalized prevailing relevant Acts/Rules/Regulations.
24. When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE Measures Company will have the right to direct the contractor to cease work until the non-compliance is corrected.
25. The contractor should prevent the frequent change of his contractual employees as far as practicable.
26. The contractor should frame a mutually agreed bridging document between OIL & the contractor with roles and responsibilities clearly defined.
27. For any HSE matters not specified in the contract document, the contractor will abide the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.

****

ANNEXURE-BBB

SPECIAL TERMS AND CONDITIONS

The following clauses shall be read in conjunction with General Conditions of Contract as well as Technical Specifications to the extent applicable. In case of any discrepancies between the stipulations in these documents, the General Conditions of Contract shall stand superseded.

1. Objective

The main objective of this project is to prepare DETAILED PROJECT REPORT(DPR), DESIGN, MANUFACTURE, SUPPLY, INSTALLATION, ERECTION, TESTING AND COMMISSIONING WITH AMC OF 20 KWp OFF-GRID SOLAR PV POWER PLANT FOR REPEATER STATION No.5 AT JAGIROAD,MARIGAON,ASSAM OF OIL'S NAHARKATIA-BARAUNI TRUNK PIPELINE WITH REMOTE MONITORINGS AND CONTROLS AS WELL AS AUTOMATIC STARTING/STOPPING OF STANDBY DG SET AS AND WHEN REQUIRED DEPENDING UPON POWER/LOAD CONDITIONS .

Location and other related data:

The site is located at Jagiroad Town in Marigaon District of Assam, adjacent to the National Highway No. 37 at a distance of about 60 KM from Guwahati. Jagiroad is connected by railway and NH-37 with Guwahati and other major cities in north-east. Hotels , restaurants and other facilities available at Jagiroad. The proposed project site is protected area and manned by security personnel. For details of existing layouts of OIL installation Drawing No.OI/PL-0741 may be referred to.

Latitude: 26degree 07'55"N
Longitude: 92degree 12'23"E
Humidity: Max.:100% and Min: 70%, Average: 75%
Ambient Temperature: 4 degree (Min.),40 degree(Max.)& Reference Temp: 25 degree Celsius.
Elevation: 54.1 MASL
Maximum Total Rainfall:353.6 mm (July)
Earthquake Zone: 5(IS 1893).

Existing Power& related Set Up at Site:

The station is unmanned and there are three 20 KW DG sets and one of the three set is run to meet the power requirements on 24 hours x 365 days basis. On failure of duty set, other set starts automatically & sequentially and takes the load. The load consist of lighting, communication, telemetering & other laser equipments

,CP Transformer Rectifier Unit, battery charger and 2X 1.5 ton split(5-star) Air conditioners. Average normal load 3-5 KW depending on climatic condition .The System Voltage: 400 V A.C.
All the local operating & process parameters are integrated with Mainline SCADA of the pipelines through OIL's optical fibre infrastructure.

2. Scope of Work:

2.1 The scope of work includes prepare Detailed Project Report (DPR), Verification of site and DNI data, Design, Manufacture, Supply, Installation, erection, Testing and Commissioning and maintenance of Off-grid Solar Photovoltaic Power Plant of 20 KWp with remote monitoring and Controls facilities AS WELL AS AUTOMATIC STARTING/STOPPING OF STANDBY DG SETS AS AND WHEN REQUIRED DEPENDING UPON POWER/LOAD CONDITIONS SEQUENTIALLY.
The scope also includes preparation of documents and co-ordinate to get MNRE subsidy.

2.2 The system comprising of equipments, modules, interfacing devices, battery banks, and related items for Off- grid Solar Photovoltaic Power Plant of 20 KWp with at least average generation of 27000 kwh annually at system output voltage of 400 volts a.c. shall include the following but not limited to the supply, erection, testing, commissioning and integration into the OIL's Mainline SCADA to facilitate control& monitoring from Master control Room at Pipeline Headquarters, Noonmati, Guwahati, Assam suitably :
a) Solar PV modules of composite capacity as mentioned above including mounting frames, structure, array foundation and module inter connection, Array Junction boxes.
b) Power Conditioning Units that are communicable on with remote sensing, DSP and sleeping mode operation. System shall initiate DG set START command in existing sequence when SPV system unable to meet the load demand and initiate DG Set STOP command when SPV system ready/able to take the load. Suitable manual control both from local control desk and Remote Master Control desk shall be incorporated in the system.
c) AC power evacuation panel with bus bars and circuit breakers with proper interfacing with the existing distribution panels.
d) Metering and protection /Isolation systems. Meters to be communicable on remote sensing.
e) LV Power and Control Cables including end terminations and other required accessories for both AC & DC power.
f) Earthling system for PV Array, DC power system, lightning protection system, AC power system for LT, equipment etc for

control room building, PCU, Data acquisition system with remote monitoring and controls, facilities.

g) Transportation of equipment from works to site

h) Unloading, loading in of all supplied equipments on foundations at the selected place.

i) Pre-Commissioning & commissioning of all supplied equipments

j) Test running of the Solar Plant as well as load trials at site.

k) Contractor shall be responsible for obtaining all statutory clearances including but not limited from Electrical Inspector regarding operation of the Plant. OIL shall however facilitate to ensure that the same is obtained successfully.

l) The system should be capable of providing all the data including that of meters and PCU to the Remote Monitoring/Control Facilities to be installed at Pipeline Headquarters, OIL, Guwahati with relevant IEC protocol. All the equipment /hardware /software along with a latest version of branded laptop and necessary software for mobile monitoring for complying with the same will be in the bidder's scope.

m) UPS /Battery/ Battery charger system to be considered as part of the scope so as to keep the system live throughout year. The battery should be of sufficient capacity to provide continuous back up for two days with normal average power only even during rainy/low sunshine days without any interruption depending the daily solar radiation and climatic parameters.

n) Contractor shall be responsible for all civil jobs such as construction ,erection ,installation, etc. as required depending upon designed system and the site conditions including all material supply, labour etc. related to construction, erection, installation & commissioning.

o) Contractor shall be responsible for all tools, tackles and test equipment required for commissioning and carrying out tests.

p) Contractor shall be arranging boarding & lodging for his engineers and transportation of men and materials to site at his own expense.

q) Location of site is at Jagiroad Town in Marigaon District of Assam, adjacent to the National Highway No. 37 at a distance of about 60 KM from Guwahati.

r) The Comprehensive AMC of the plant for 5 years after warranty period shall be the part of the contract.

s) Supply and installation of 6 Numbers energy efficient LED lights(Reputed Make) of suitable wattage in place of existing Security Light Fittings for equivalent illumination shall also be in contractor's scope.

3. Design of system

The bidder to ensure proper system designing that would include his own independent studies on peak sunshine data, resulting in the correct sizing of equipment for the solar energy system and Battery Bank with optimum Capacity for full back up for at least two rainy/cloudy days. It is therefore very important to form proper design procedures and component sizing before any actual implementation. The design procedures and all the equipment shall comply MNRE specifications.

4. Terms of Payment
4.1 Payment Schedule:

4.1.1 Payment Schedule for Design, Manufacture, Supply, Packing & Forwarding, Transportation to site of Off-Grid Solar Photovoltaic Power Plant with REMOTE MONITORINGS AND CONTROLS

4.1.1.1 Before the contractor becomes eligible for any payment under the contract he shall fulfill the following:
a. Submission of Bank Guarantee towards security deposit as per para 4.2 below.
b. Submission of a Bank Guarantee equivalent to 10% of the total Contract Price valid for a period of first 5 years after commissioning for settlement of claims against the Performance Guarantee Parameters stipulated at clause no. 7.0

4.1.1.2 10% of the total price for Design, supply of equipment, materials, maintenance tools and tackles & spares shall be paid against preparation of DPR, Verification of site & DNI data and Design of the plant.
4.1.1.3 60% of the total price for Design, supply of equipment, materials, maintenance tools and tackles & spares shall be paid against supplies on receipt of total supplies under the Contract at site.
4.1.1.4 30% of the total price for Design, supply of equipment, materials, maintenance tools and tackles & spares shall be paid on successful completion of installation and commissioning.

4.1.2 Payment Schedule for Unloading at Site, Erection, Testing and commissioning of 20KWp SPV power plant
4.1.2.1 Before the contractor becomes eligible for any payment under the contract he shall fulfill the following:
a) Submission of another Bank Guarantee towards security deposit as per para 4.2 below.
b) Submission of a Bank Guarantee equivalent to 10% of the total Contract Price valid for a period of first 5 years after commissioning for settlement of claims against the Performance Guarantee Parameters stipulated at clause no. 7.0.

4.1.2.2 90% of the total price for Erection, Testing and Commissioning of equipment and materials upon completion of Erection at site and completion of acceptance tests at site.
4.1.2.3 10% of the total price for Erection, Testing and Commissioning of equipment and materials upon successful handing over of the Plant to OIL.

4.1.3 Payment Schedule for 5 years Comprehensive AMC
4.1.3.1 90% on pro-rata towards the Annual Maintenance Contract shall be paid against submission of duly certified invoice on quarterly basis.
4.1.3.2 The last 10 % payment upon completion of successful completion of Annual Maintenance Contract.

Bidder's to furnish the Annual Maintenance Schedule as part of the Offer
4.2 Security Deposit
Before the Contractor is entitled for any payment under this Contract, he shall submit a Bank Guarantee towards Security Deposit for 10% of the total Contract Price valid in full valid up to end of 2 months after warranty period. All BGs towards Advance and Performance Guarantees, in the format as per our tender, shall be from the Nationalized / Public Sector banks or other banks as approved by the OIL.

5. Completion Time:
The Completion and handing over of the Off- Grid SPV projects shall be done within 3 months from date of issue of LOI/PO . However, we request to quote your best possible Commissioning Schedule but not later than the above-mentioned requirement. The Bidder shall submit L1 / L2 schedule along with the offer.

6. Liquidated Damages
6.1 OIL shall levy Liquidated Damages at the rate of 0.5% of the Contract Price per week of delay in completion time, subject to a ceiling of 7.5 % of the total contract value. For this, purpose a delay of one day also shall be considered as a delay of one week.
6.2 The Liquidated damages for Performance Guarantee parameters shall be as Specified in Clause 7 below.
6.3 The liquidated damages on account of delay as well as performance parameters during warranty shall be limited to a maximum of 7.5% of the Contract price. There shall be no cap on liquidated damages on account of performance parameters related to guaranteed generation mentioned in clause 7.0 below.
6.4 Further, the Contractor will have to satisfy the requirement of Technical Specifications. If the required parameters are not achieved, then the Contractor will have to rectify the same within

a period of one month, failing which the equipment will be rejected and all damages shall be recovered from the Contractor.

6.5 After erection / commissioning, the System supplied under this Contract shall have to pass the site tests as stipulated in the Technical Specification without any deviations thereof, otherwise OIL shall have the right to reject the entire equipment & recover the amounts paid together with compensation in relation thereto or levy liquidated damages as deemed fit by OIL at his sole discretion.

7.0 Performance Guarantee Parameter

7.1 Solar PV Module: Module shall be having a minimum guarantee for a period of 25 years. In case of any deviation observed during operations from the performance guarantee parameters cited, the Contractor shall be informed in writing by OIL. The Contractor shall be responsible to rectify the same within 10 days of notification without any extra cost to OIL. Performance guarantee parameters on output of solar module shall be as follows:

End of Year
Guaranteed Output
1 98.5%
2 97.5%
3 97%
6 95.5%
8 94.5%
10 93.5%
15 91%
20 88.5%
25 86%

The above shall be guaranteed at the consumer end and that shall be treated as the measuring point. The bidders should provide a quarterly guaranteed generation in MUs (Million Unit) along with the offers over the next 25 years considering the degradation in output based on clause above. Penalty shall be levied on an annual basis in terms of revenue lost to the utility for the deviation in output.

(Penalty: 2* (Tariff) * (MUs guaranteed # MUs supplied))
Tariff shall be as per prevailing ASEB rates for Guwahati.

Further, the bidders shall be allowed a notice period of 10 days to rectify the discrepancy, failing which a penalty of Rs. 5000 per day shall be levied till rectification, is done.

7.2 Power Conditioning Unit (PCU): PCU shall have a minimum warrantee period of 5 years from the date of commissioning. The

Bidder’s detailed Warranty/ Guarantee clause shall be furnished. Efficiency of the PCU shall not be less than 97% (EU). In case of any deviation observed during operations from the warranty cited, the Contractor shall be informed in writing by the OIL. The Contractor shall be responsible to rectify the same within 10 days of notification without any extra cost to OIL.

*Successful Bidder shall provide a bank guarantee for the first 5 years for settlement of claims as mentioned in clause 4.1.2.1 (b) against the Performance Guarantee Parameters stipulated above. The guarantees shall be irrevocable and unconditional as per the prescribed formats, in order to safeguard the interests of OIL and to ensure continued delivery of performance parameters as stipulated above.

7.3 The mechanical structures, electrical works and overall workmanship of the grid solar power plants must be warranted for a minimum of 5 years.

8. Insurance

8.1 The Contractor shall take Comprehensive Marine cum Erection Insurance policy for the complete Project and for the insurance to be arranged by the Contractor, the Contractor shall be responsible for settlement of claims with the underwriters. The Contractor shall be the loss payee under the policy and the Contractor will arrange replacements / rectification expeditiously without waiting for settlement by insurance claim at Contractor#s own cost.

9. Spares

9.1 Bidders to provide Commissioning Spares required for smooth commissioning of the plant. Bidder shall submit a list of such commissioning spares along with the bid. All such spares shall be supplied along with the main equipment. This will be considered during evaluation of the Bid. The Contractor shall return to OIL all unused and left over commissioning spares, after successful commissioning of the plant.

9.2 Bidder shall, in addition, provide a list of recommended spares along with prices, quantity and sources. The prices of these recommended spares will not be considered while evaluating the main Bid. However, the prices shall remain firm for a period of three years after successful commissioning and handing over of the entire plant.

9.3 Bidder has to provide all spares required for the plant during the AMC period.

10. Drawings / Documents
The Contractor shall submit all initial documents in 6 copies, final documents in 6 copies along with one soft copy, and #as built# documents in 6 copies along with 1 soft copy & 1 reproducible.

11. Price
The bidder shall quote prices FOR Narangi,Guwahati / Site, which shall remain firm till the contract execution and inclusive of all taxes/ duties etc as well as site supervision for successful commissioning/ performance.

12. Approval of System Design
12.1 The design of each subsystem and bill of material intended to be used shall be submitted to respective authority for approval.
12.2 Quality Assurance Plan should include design control, process control, quality control, testing of sub-system.

13. Arbitration
The venue of arbitration shall be Guwahati.

14. Progress Monitoring
14.1 The Contractor shall appoint a Project Manager (PM) on or before the effective date of Contract for overall co-ordination. The Bio data of the PM shall be furnished to the OIL. OIL shall inform the Contractor within 7 days of receipt of Bio data, objections, if any and shall demand for a change in PM assigning valid reasons.
14.2 In case of site activities, a Site Manager (SM) shall be appointed. All provisions as per 14.1 are applicable for this clause also.
14.3 Within 3 days of the effective date of Contract, the Contractor shall submit to OIL a detailed organization chart showing the proposed organization structure for the project, along with details of key personnel, both at office and at site. OIL shall inform the Contractor within 7 days of receipt these details, objections, if any and shall demand for alteration assigning valid reasons.
14.4 These PM / SM and other key personnel shall not be removed from this Project without the permission of OIL, unless the reason is resignation.
14.5 In the interest of the timely completion of the Project, OIL may request that the Contractor alter or modify the area of monitoring. The Contractor shall furnish adequate information in the monthly progress reports in the format to be mutually agreed

upon between OIL and Contractor. The Contractor shall submit the requisite number of progress reports.
14.6 OIL may call for weekly/fortnightly or more frequent meetings at OIL’s premises to review the progress of each activity. In case the PM is not able to attend the meeting, the Contractor shall depute some other authorized representative.
14.7 The Contractor shall submit program of execution both in the form of activities in 'Network' as well as quantitative program in terms of month wise physical targets for various disciplines of work. These shall be periodically updated considering the progress of the Project.
14.8 On the first day of each calendar month following effectiveness of the Contract, two copies of a monthly progress report with exception report showing current status of various activities including status of ordered/yet to be ordered items shall be submitted by the Contractor to the OIL.
14.9 The monthly progress report to be submitted by the Contractor shall indicate progress of activities against targeted dates and targeted quantities in Performa as per the requirement of the Contract for maintaining consistency of reporting and for maintaining database by, the OIL. Reasons for shortfalls, if any, shall be clearly brought out and proposed remedial measures to arrest the delays shall be indicated by the Contractor in the progress report, wherever applicable.
14.10 The progress report shall also highlight inspection status. The Contractor shall submit one copy of the inspection certificate duly signed by representatives /authorized agencies after inspection along with each progress report.
14.11 In case of site work, manpower schedules area wise / skill wise for subsequent month and status of the same for the previous month shall be submitted.

15.0 Performance of Contract
15.1 The Contractor shall be responsible for the due and faithful performance of the Contract in all respects according to the drawings, specifications, particulars and all other documents referred to in this Contract. Any approval which OIL may have given in respect of the stores, materials, supplies or other particulars and the work or the workmanship involved in the Contract (whether with or without test carried out by the Contractor or the OIL) shall not relieve the Contractor from his obligations and notwithstanding any approval or acceptance given by the OIL, it shall be lawful for OIL to reject the material, if it is found that the materials supplied and/or erection and/or construction work carried out by the Contractor are not in conformity with the terms and conditions of the Contract.

15.2 The Contractor shall cooperate with the OIL's other contractors, if any, for any associated plant and freely exchange all relevant technical information with them to obtain the most efficient and economical design and to avoid unnecessary duplication of equipment. The Contractor shall also co-ordinate with other contractors for any interface activity at his battery limits. No remuneration shall be claimed from OIL for such technical co-operation.

16 Rejection of Defective Plant

16.1 If the completed Plant, or any portion thereof, before Final Take Over, is found to be defective or fails to fulfill the requirements of the Contract, OIL shall give the Contractor notice setting forth particular of such defects or failure and the Contractor shall forthwith make the defective plant good, or alter the same to make it comply with the requirements of the Contract. Should he fail to do so within a period of time as deemed reasonable by OIL and stated in the said notice, OIL may reject and replace at the risk and cost of the Contractor, the whole or any portion of the plant, as the case may be, which is defective or fails to fulfill the requirements of the Contract. However, such rejection/replacement by OIL shall not absolve the Contractor of any of his responsibilities under this Contract.

16.2 In the event of such rejection, OIL shall be entitled to the use of the plant in a reasonable and proper manner for a time reasonably sufficient to enable him to obtain other replacement plant.

17.0 Type, Quality of Materials and Workmanship

17.1 The Contractor shall be deemed to have carefully examined and to have knowledge of the equipment, the general and other conditions, specifications, schedules, drawings, etc. forming part of the Contract and also to have satisfied himself as to the nature and character of the work to be executed and the type of the equipment and duties required including wherever necessary of the site conditions and relevant matters and details. Any information thus procured or otherwise obtained from OIL shall not in any way relieve the Contractor from his responsibility and executing the works in accordance with the terms of contract.

17.2 The items / works under the scope of the Contractor shall be of the best quality and workmanship according to the latest engineering practice and shall be manufactured from materials of best quality considering strength and durability for their best performance and, in any case, in accordance with the specifications set forth in this Contract. All material shall be new. Substitution of specified material or variation from the method of fabrication

may be permitted but only with the prior written approval of the OIL.

17.3 The Contractor shall procure and/or fabricate all materials and equipment in accordance with all requirements of Central and State enactment, rules and regulations governing such work in India and at site. This shall not be construed as relieving the Contractor from complying with any requirement of OIL as enumerated in the Contract which may be more rigid than and not contrary to the above mentioned rules, nor providing such construction as may be required by the above mentioned rules and regulations. In case of variance of the Technical Specification from the laws, ordinance, rules and regulations governing the work, the Contractor shall immediately notify the same to the OIL. It is the sole responsibility of the Contractor, however, to determine that such variance exists. Wherever required by rules and regulations, the Contractor shall also obtain the statutory authorities' approval for the plant, machinery and equipment to be supplied by the Contractor.

17.4 The Contractor shall follow all codes and standards referred in the Contract and the documents related thereto. Codes and standards of other countries may be followed by the Contractor with the prior written approval of OIL, provided materials, supplies and equipment according to the standard are equal to or better than the corresponding standards specified in the Contract.

17.5 Brand names mentioned in the Contract documents are for the purpose of establishing the type and quality of products to be used. The Contractor shall not change the brand name and qualities of the bought out items without the prior written approval of the OIL. All such products and equipment shall be used or installed in strict accordance with original manufacturer's recommendations, unless otherwise directed by the OIL.

18.0 Validity

The validity of the Contract shall not be affected, should one or more of its stipulations be or become legally invalid and such stipulation is severable from and not fundamental to the obligations of either party to this Contract. In such a case, the parties shall negotiate in good faith to replace the invalid clause by an agreed stipulation which is in accordance with the applicable law and which shall be as close as possible to the Contract’s original intent.

19. PARTICIPATION OF OIL’S ENGINEERS

19.1 For basic design and detail engineering of Plant and Equipment carried out by Contractor/ Subcontractors, OIL reserves the right

to depute his / Consultants' engineers hereafter called OIL#s Engineers, to participate in this work.
19.2 The participation assignment, number of OIL#s engineers, their technical disciplines and the period of participation shall be mutually agreed.
19.3 The Contractor shall provide all opportunities and information to OIL#s engineers to get acquainted with the technical know-how and the methods and practices adopted by the Contractor in basic and detail engineering. The Contractor shall provide documents, drawings, calculations etc. as may be required by OIL#s Engineers.
19.4 OIL shall bear all costs relating to airfares, local travel, residential accommodation and subsistence in respect of OIL#s engineers.

20. INSPECTION AND TESTING
20.1 OIL shall have the right of inspection and testing the contract work or any part thereof at any stage during the manufacture at the Original Equipment Manufacturer’s premises. Should the Contractor himself not be in a position to carry out the tests, he shall, within five (5) days of receipt of the OIL's demand prepare specimen and samples and send them at his own cost to such testing stations as OIL may specify and the cost of the test so effected shall be to the Contractor's account. However, cost pertaining to the OIL's inspection personnel shall be borne by the OIL.
20.2 The Contractor shall bear all costs of any and all inspections and tests.
20.3 Should a part of the plant be manufactured not on Contractor's own premises but on other premises, the Contractor shall likewise obtain permission for OIL to inspect and test the work as if the said plant were being manufactured on the Contractor’s premises.
20.4 Within 15 days after the effective date of Contract, the Contractor shall submit a detailed Quality Assurance Plan (QAP), covering all activities under scope of supply of the Contractor and all stages of inspection, for OIL to comment / approve the same, and indicate OIL#s hold points.
20.5 The Contractor shall give OIL a minimum of ten days (10) days clear notice of any work being ready for inspection and tests specifying the period likely to be required for such inspection and tests. Thereafter, OIL or his inspector shall attend at the OEM#s premises, such inspection and tests within seven (7) days of the date on which the equipment is notified as being ready for inspection and test.
20.6 The Contractor shall furnish to the OIL, 2 (two) copies of unpriced purchase orders including detailed technical specification and drawings placed on his sub-contractors/sub-suppliers as soon as such orders are placed by the Contractor, but in any case not later

than one (1) month before the expected date of the equipment getting ready for inspection.
20.7 In cases where OIL have to conduct the inspection, whether at the premises or works of the Contractor, the Contractor shall, provide free of charge to OIL such labour, materials, electricity, fuel, water, stores, apparatus and instrument and/or facilities as may reasonably be deemed required to carry out efficiently such tests of the plant in accordance with the contract and shall give all such facilities to OIL or his authorised representative to accomplish such tests.
20.8 When the inspection/tests have been satisfactorily completed at the contractor's or his sub-contractor's premises, OIL shall issue a certificate to that effect (to the extent such certificate is required to be delivered by OIL pursuant to this Contract).
20.9 In case any Equipment fails in inspection/tests or the test reports are not satisfactory, OIL shall reject or demand rectification / re-inspection. Re-inspection/retest shall be carried out only after necessary rectification work/replacement by the Contractor.
20.10 No Plant, Equipment and Material shall be shipped before the inspection certificate /waiver certificate and dispatch clearance have been issued by the OIL.
20.11 In the case of commissioning spares, operating and maintenance spares and insurance spares, the same shall be offered for inspection along with the main equipment.
20.12 The inspection, examination or testing carried out by OIL shall not relieve the Contractor from any of his obligations under this Contract.

21.0 Penalty

For any delay in attending breakdown report, delay in completing breakdown report of the plant, penalty will be imposed as under:

21.1 More than 5 days to 10 days, 0.5% of the annual maintenance contract amount will be deducted per day.
21.2 More than 10 days to 20 days, 1% of the annual maintenance contract amount will be deducted per day.
21.3 More than 20 days, 3% of the annual maintenance contract amount will be deducted per day.

21.4 After 20 days, OIL may take up the maintenance works on its own, and deduct all expenses from the contractor.

22. TRAINING
22.1 Contractor shall arrange for training OIL's personnel for working procedures and systems covering working norms and quality

standards. Such training will include training in Contractor's design and engineering department and/or in the manufacturers shop and for operation and maintenance in working plants at no cost to OIL.

22.2 The Contractor shall furnish detailed training program for OIL#s personnel not later than 2 months from the effective date of the Contract. The training program shall be imparted to ensure the readiness of OIL#s personnel before the commencement of operation of the plant. The travelling and living expenses of the OIL's trainees shall be borne by the OIL. OIL shall also arrange necessary travel documents for his trainees. The Contractor shall, however, assist in arranging visa and medical insurance of trainees, wherever necessary.

23.0 Performance Guarantee, Availability & Reliability Requirement and Tests

23.1 Performance Guarantees & Tests

23.1.1 The guarantee for performance includes ratings/output for the individual items, systems and electrics as well as Technical Specifications for the integrated operation of the Plant. The Contractor's responsibility under this guarantee shall not in any way be reduced, diminished or absolved for any reason whatsoever in respect of supplies, materials and equipment not manufactured by the Contractor. Details of Performance Guarantee tests and method of computation of performance values shall be as per Technical specifications and Special Conditions of Contract.

23.1.2 The Contractor undertakes to demonstrate to the satisfaction of OIL the Performance Guarantee (PG) Tests and achieve all the parameters as specified in Technical Specifications of the Contract within 15 days from the date of notice to Contractor regarding readiness of plant / equipment for PG tests.

23.1.3 The Contractor shall provide and install all measuring instruments required for checking the guaranteed performance which are not included among the permanent measuring instruments of the unit/sub-unit. Such instruments shall be furnished by the Contractor on a temporary basis for the duration of the Performance Guarantee Tests.

23.1.4 During performance tests, OIL shall make available necessary Operating and Maintenance personnel. However, the charges for consumable etc. and other such items shall be borne by the Contractor.

23.1.5 In case the Contractor fails to demonstrate and prove the Performance Guarantees and achieve the results as agreed in the Contract, the Contractor undertakes to rectify the Plant and Equipment and continue to demonstrate and prove the Performance Guarantees till the rated output and other parameters are achieved. In case the rated output and other parameters are not achieved even

after repeated Performance Guarantee Tests within 15 days of first test, the Contractor shall be liable for Liquidated Damages due to non-performance as per Special terms & Conditions.
23.1.6 In case either the performance parameters achieved during the performance guarantee tests are not within the acceptable limits as per Technical Specifications or the total liquidated damages due to shortfall in performance has exceeded the ceiling, OIL shall have the right to reject the plant as per "Rejection of Defective Plant" clause mentioned elsewhere in the Contract.

23.2 Availability
23.2.1 The Equipments under this Contract shall be designed for maximum reliability, availability, and maintainability and as specified herein.
23.2.2 The Contractor shall design the plant to maximize the availability and the value shall be as per Technical Specifications. Any shortfall in the guaranteed availability factor of any of the Unit will be subject to Liquidated Damages. The Liquidated Damages for shortfall in guaranteed availability factor shall be as per Special Terms & Conditions.

24. ERECTION, INSTALLATION & CIVIL WORKS
The Contractor shall strictly adhere to the following as applicable as per scope of work
24.1 Mobilization and access to site
24.1.1 Communication facilities, if required shall be arranged by the Contractor.
24.1.2 While execution of work, no person other than the Contractor, Sub-Contractor and his or their employees shall be allowed on the Site during working hours except with the written permission of the OIL. Facilities to inspect the works at all times shall be afforded by the Contractor to OIL and his representatives and other authorized officials. The labour camps shall not be established by the Contractor inside the site premises. Nothing extra shall be payable by OIL on this account.
24.1.3 The access to the Site shall be exclusive to the Contractor but only to enable him to execute the works. The Contractor shall afford to OIL and to other Contractors whose names shall have been previously communicated in writing to the Contractor by the OIL, reasonable facilities for the execution of the work concurrently with his own.
24.2 Safety
24.2.1 Upon arrival of Plant and Equipment/Material at the Site, the Contractor shall assume custody thereof and remain responsible thereafter for safe custody until the whole plant is handed over.
24.2.2 Adequate firefighting equipment and extinguishing agents of sufficient capacity and quantity must always be available at site

and kept ready for immediate use. Sufficient number of workmen must be fully trained in the use of such equipment and must be available for immediate intervention at all times

24.2.3 For storage of materials and equipment for the construction and erection work, storage must be subdivided into storage units and the distance between such storage units shall be as acceptable to the insurance company which issued the policy. All inflammable materials and especially all inflammable liquids and gases must be stored at a sufficient large distance from the property under construction or erection and from any hot work.

24.2.4 Welding, soldering or the use of an open flame in the vicinity of combustible material is only permitted if at least one workman suitably equipped with extinguishers and well trained in fire-fighting is present.

24.2.5 At the beginning of work, all fire-fighting facilities must be checked thoroughly.

24.2.6 Explosives shall not be used at the site by the Contractor without the permission in writing of OIL and only in the manner and to the extent to which he has prescribed. Where explosives are used by the Contractor, the same shall be transported to the site in explosive proof van and stored in a special magazine to be provided by and at the cost of the Contractor, who shall be liable for all damages loss or injury to any person or property and shall be responsible for complying with all statutory obligations in these respects. The contractor shall employ only licensed blasters.

24.2.7 The contractor shall for the duration of the contract, maintain in good order and condition all such protective apparel and equipment (such as safety helmets, safety belts, gloves etc.) for all their workmen and staff engaged for contract work as may be required to be used by Law and by the OIL. The contractor shall ensure that such protective apparel/ equipment are worn and used by their workmen and staff without fail. In case OIL notices any non-compliance thereto, OIL will not only be entitled to make alternative arrangements for the same but recover cost and damages plus OIL#s own charges @ 20% or as deemed fit by the company, on his account.

24.2.8 The contractor shall follow the safety instructions as mentioned in Annexure-X.

24.3 Care of works and security

24.3.1 From the commencement to the completion of work, the Contractor shall take full responsibility for the care of Works and for all temporary Works from damages, loss or theft, by making suitable security arrangement. In case any damage or loss shall happen to the Works or to any part thereof or to any temporary Works from any cause whatsoever, the Contractor shall at his own cost replace or repair and make good the same.

24.3.2 The Contractor shall be responsible for proper fencing, lighting, guarding and watching of all works at site until handing over and further arrange proper provisions for like period of temporary drainage, roadways, foot-ways, guards and fences as far as may be rendered necessary by reason of works for accommodation and protection of the OIL's adjacent property and that of, the public and others.
24.3.3 The Contractor must take sufficient care in moving his construction plants and equipment from one place to another so that they may not cause any damage to the property of the OIL, particularly to the existing structures and overhead and underground services and in the event of Contractor's failure to do so, the cost of such damages shall be borne by the Contractor.
24.3.4 The Contractor shall take all precautions during execution, especially while excavating to avoid interference with or damage to underground works, such as cables, pipe lines, drains etc. and provide all possible protection to these works and in case they are damaged, rebuild/divert them at his own cost.
24.3.5 All operations necessary for the execution of the works and for the construction of any temporary works shall so far as compliance with the requirements of the Contract permits be carried on so as not to interfere unnecessarily or improperly with the public convenience or the access to use and occupation of public or private roads and footpaths or of properties whether in the possession of OIL or any other person and the Contractor shall save harmless and indemnify OIL in respect of all claims demands, proceedings, damages, costs, charges and expenses, whatsoever arising out of or in relation to any such matters.
24.3.6 Due to any emergency, any protective or remedial work is necessary within the Contractor’s battery limit, the Contractor shall immediately carry out such work. If the Contractor is unable to or unwilling to do the work, OIL shall carry out such work and all costs incurred due to this shall be deducted from Contractor’s payments.

24.4 Boarding, lodging & transport
The Contractor shall take care of the boarding, lodging, all travel between Contractor’s office and site etc. of his direct and indirect employees.

24.5 Construction Water and Power
The Contractor needs to make suitable arrangement for Construction Water and Power based on site conditions. To the extent possible, OIL shall facilitate the same. Non availability of Power from OIL should not be an excuse for delay in completion of the project

24.6 Site grading / Excavation
All fossils, coins, articles of value of antiquity and structures and other remains or things of geological or archaeological interest discovered on the site of the works shall be deemed to be the absolute property of OIL and the Contractor shall take reasonable precaution to prevent his workmen or any other person from removing. or damaging any such article or thing and shall immediately upon discovery thereof and before removal acquaint OIL of such discovery and carry out at the expense of the OIL
as to the disposal, removal or otherwise of the same.

24.7 Unloading
The RR/Challans duly endorsed will be handed over to the Contractor for taking delivery of materials from railway / trucks / ships unloading the same from wagons/ trucks / ships and subsequent handling, transportation and storage at the Site after submission of custody cum-indemnity bond in OIL's approved Performa. The demurrage charges, if any, will be payable by the Contractor for the reasons attributable to the Contractor.

24.8 Supply of erection / construction materials and consumables
The Contractor shall provide all necessary erection equipment and tools and tackles including material handling equipment (crane service will be provided by OIL), compressors and other equipment and instruments and consumables, all commissioning equipment and instruments, welding equipment, winches, alignment tools, precision levels etc., which may be required for carrying out the erection and commissioning work (as applicable) efficiently. Unless otherwise specified, the above erection equipment / materials shall be the property of the Contractor. However, OIL#s prior written permission shall be required for removal of these erection equipment / materials from the Site. The Contractor shall ensure that proper documentation is followed at entry gate of OIL's premises for such items, which shall be carried back by Contractor after completion of work.

24.9 Erection / installation and construction
24.9.1 For completing the work within the time schedule, the Contractor shall carry out the work round the clock by providing adequate manpower, however, without violating any labour laws and safety guidelines.
24.9.2 The Contractor shall unpack and do visual checking against physical damages to the equipment /cases, clean equipment before start of erection. Damage, if any, will be reported to the OIL/ Consultant and shall be rectified / replaced expeditiously (in case of materials not supplied by the Contractor), so as not to upset the erection and commissioning schedule. Delay on account of

settlement of insurance claims shall not be considered an excuse for delay in Completion.
24.9.3 The Plant and equipment will be installed on the civil foundation/structures (including power control room and battery room) to be constructed by the Contractor. However, if any minor deficiency is noticed in the dimensions, centerlines, levels, locations etc. of the foundation or anchor bolts or other embedment's, the Contractor shall make arrangement for rectification of the same at his own cost. Chipping/dressing of the foundation with air or air and water jet prior to placing the equipment on foundation will also be carried out by the Contractor. However, the procedure for rectification will be finalized by the Contractor with the written approval of OIL .
24.9.4 CC mattress shall be done on the Solar Panel array area.

24.10 Inspection & Testing during erection & commissioning
24.10.1 OIL or his authorized agent shall have the right of inspection and testing the materials brought to site by the Contractor and erection / installation / construction work at any stage and the Contractor on demand from OIL shall carry out such tests in an appropriate manner in the presence and free of charge to OIL.
24.10.2 Within 15 days after the effective date of Contract, the Contractor shall submit a detailed Quality Assurance Plan (QAP), covering all activities under scope of supply of the Contractor and all stages of inspection, for OIL to comment / approve the same, and indicate OIL#s.
24.10.3 No work shall be covered up or put out of view without the approval of the OIL. In the event of failure to do so, the Contractor shall uncover any part of the work or make openings in or through the works as OIL may direct and they shall be made good with materials approved by OIL and should match with workmanship of the surrounding work.
24.10.4 The Contractor shall at his cost, arrange for construction laboratory equipment, testing materials, consumables etc., at site for testing of construction materials such as cement, aggregates, concrete cubes, soil and other consumables.
24.10.5 Any special measures or techniques which may be necessary for construction of structures such as dewatering, sheet piling, diaphragm walls, well sinking, well point system and continuous pouring of concrete shall be deemed to have been taken into account by the Contractor and no extra claim, whatsoever, shall be entertained.
24.10.6 The Contractor shall carry out structural load test on each part of the building/structure at his own cost if such structural load test is warranted due to unsatisfactory test results of concrete cubes and if so directed by the OIL.

24.10.7 OIL may during the progress of Work, order the removal and re-erection of part or whole of the work executed, that is found not in accordance with the approved drawings/ specifications written instructions. OIL shall not be responsible for any costs incurred in connection with any such removal and re-erection; the Contractor shall indemnify OIL for any costs and expenses that OIL may have incurred in connection with such removal and re-erection. Re-inspection/retest shall be carried out only after necessary rectification work/replacement by the Contractor.
24.10.8 The inspection, examination or testing carried out by OIL shall not relieve the Contractor from any of his obligations under this Contract.

25.0 Handing over
25.1 On completion of the work, all rubbish, kilns, vats, tanks, materials and temporary structure of any sort or kind used for the purpose or connected with the construction/erection work shall be removed by the Contractor and all pits and excavations filled up and the site handed over in a tidy and workmanlike condition and no final payment in settlement of the account for the said work shall be held to be due or shall be made to the Contractor until such Site clearance and restoration shall have been effected by him and such clearance and restoration may be made by OIL at the expenses of the Contractor in the event of his failure to comply with this provision within seven (7) days after receiving notice in writing from OIL to that effect. If it becomes necessary for OIL to have the site cleared as indicated above at the expense of the Contractor, OIL shall under no circumstances be held liable for any losses or damages to such of Contractor's property as may be on such site due to such removal there from, which removal may be effected by means of public sale of such materials and property or in such a way as seems fit and most convenient to the OIL.
25.2 For the purpose of removing surplus materials in its original form, the Contractor shall submit the documents/records evidencing the entry of materials inside the Plant by producing the Gate Entry Permits and consumption statements based on approved drawings to establish the surplus quantity of the materials belonging to the Contractor. OIL shall allow the Contractor to remove such materials if it is satisfied, in its sole and absolute discretion, only after completion of the entire Work.
25.3 No imported Material shall be allowed to be taken out other than imported tools and tackles and instruments brought by the Contractor on draw back basis and provided, he has carried out necessary documentation at the time of taking such items inside the Plant
25.4 The Contractor shall return to OIL all unused and left over commissioning spares, after successful commissioning of the plant.

25.5 OIL shall have the right to take possession or use any completed or partially completed Work. Such possession or use shall not be deemed to be an acceptance of any work done not in accordance with the Contract. However, any damage to such work solely due to such provision or use shall be to the OILs account.

26.0 USE OF COMPANY#S EQUIPMENT:
26.1 Contractor shall assume the risk of and shall be solely responsible for damage to and loss or destruction of materials and equipment or supplies furnished by Company. In case there is a loss or damage to the company's equipment for causes attributable to contractor, the contractor shall compensate the company.

27.0 WAIVERS AND AMENDMENTS:
It is fully understood and agreed that none of the terms and conditions of the Contract shall be deemed waived or amended by either party unless such waiver or amendment is executed in writing by the duly authorized agents or representatives of such party. The failure of either party to execute any right of termination shall not act as a waiver or amendment of any right of such party provided hereunder.

28. After Sales Service
The details of service centers in India shall be provided along with the offer. All essential materials & manpower shall be placed at the service centers to ensure quick & efficient after sales service.

29. Comprehensive Annual Maintenance Contract
This shall cover two parts
a) Scheduled/ Preventive maintenance
b) Unscheduled/ Break Down maintenance

29.1 Scheduled/ Preventive maintenance
The contractor shall have to quote the rates for Annual Maintenance Contract for 5 years after the warranty period, which includes bi monthly visits/mutually agreed interval and supply of essential spares. During the visit, cleaning of the panels & tightening of the connections shall be carried out.

The AMC shall include overall supervision of maintenance activities that are required to ensure optimum performance of the Solar system as per the performance guarantee parameters indicated above and Guaranteed Generation figures for 25 years submitted by the contractor.

The contractor shall submit a Detailed Annual Maintenance schedule to OIL within 15 days of the placement of the purchase order/contract for AMC and on or before 15th January every year thereafter.

The contractor shall also submit a detailed report every quarter to OIL about the maintenance carried out in the concerned period.

For ongoing cleaning and maintenance the contractor shall provide man power to carry out routine maintenance in line with OEM#s recommendation.

29.2 Unscheduled/ Break Down maintenance
The contractor shall have to rectify any functional failure in the system. The contractor shall be allowed a notice period of 10 days from the date Break Down to rectify the same, failing which a penalty as per clause 21 shall be levied.

29.3 Spares required during AMC
The contractor shall supply all spares required during the AMC period. This includes spares for scheduled as well as unscheduled maintenance.

30. Warranty
The Contractor shall be liable to replace any parts that may fail or show signs of defects in the works done by the Contractor under this Contract, or from any act or omission of the contractors for a period of 12 months from the date of Commissioning of the complete Power Plant or 24 months from the date of last major dispatch, whichever is earlier.

31. General Conditions of Contract
All other terms and conditions shall be as per General Conditions of Contract enclosed. However, in case of any discrepancy between the Special Terms and Conditions and General Conditions of Contract, Special Terms and Conditions shall prevail.

xxxxxxxxxxxxxxx

ANNEXURE - CCC

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that passed through the "BID REJECTION CRITERIA (BRC)" as stipulated in this documents.

Other terms and conditions of the enquiry shall be as per general terms and conditions vide MM/LOCAL/E-01/2005 for E-procurement LCB tenders. However, if any of the clauses of the BRC/BEC contradict the clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC/BEC shall prevail.

BID REJECTION CRITERIA (BRC):

The bid shall conform generally to the specifications and terms and conditions given in the Tender Document. Bids will be rejected in case services offered do not conform to the required parameters stipulated in the Scope of Work. Not-withstanding the general conformity of the bid to the stipulated specifications, the following mandatory requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. All documents related to BRC must be submitted along with the Techno-Commercial Bid.

A. TECHNICAL:

1.0 General
1.1 The offered Solar PV plant shall be rated for a minimum of 20 KWP.
1.2 The 20 KWp Solar PV Plant shall be a complete system and meet the specifications as per Technical Specifications of the NIT and conforming to MNRE specifications.
1.3 Any offer which does not include all the jobs/services mentioned in the Scope of Work will be considered as incomplete and rejected.
2.0 Bidder's Qualification:
2.1 Bidder shall be an Original Equipment Manufacturer (OEM) of Solar PV module or Bidders shall be Channel partner with valid accreditation of MNRE under JNNSM.
3.0 Experience:

3.1 A bidder should have experience of setting up of minimum two numbers of not less than 10 KWP Solar PV power plant (each) from concept to commissioning including operation and maintenance (O&M) in India, one of which should be in a Central / State Govt. / public sector undertaking (PSU)/Public limited company, during the last seven (07) years.
3.2 The SPV Power Generation Projects as quoted in 3.1 above, which the party has commissioned should be working successfully for at least six months from the date of commissioning.

Supporting documentary evidences to be provided:
The Bidder shall furnish documentary evidences as mentioned below along with the bid to establish his qualification/experience / track record meeting Technical Criteria as stated vide Para 2.1, 3.1 & 3.2. The certification by the bidder for his / her own Solar PV power plant will not be acceptable.
a) The bidder shall enclose documentary evidence along with the offer in support of 2.1

b) Copy of Work Order/ Contract agreement and completion certificate that the bidder has experience as per 3.1
c) Performance Certificate from the user regarding successful operation of the Solar PV power plant Project for at least one (01) year as per Para 3.2 above.

4.0 Average Annual Financial Turnover as per Audited Annual Reports for the last three accounting years as on the bid closing date should be at least Rs. 85.00 lakhs (Rupees Eighty-five Lakhs) only.

For proof of Annual turnover, attested copies of the following documents should be submitted along with the bid:

i) A certificate issued by a practicing Chartered/ Cost Accountants' Firm, certifying the Annual Turnover and nature of business, and
ii) Audited Balance Sheet and Profit and Loss account.
4.1 Bidder must quote for the AMC. The bidder shall submit an undertaking in support of their concurrence of doing the AMC for five years.

B. COMMERCIAL:

i) Bids are invited under Single Stage Two Bid System. Bidders have to submit both the Unpriced Bids and Priced Bids through electronic form in the OIL#s e-Tender portal within the Bid closing date and

time stipulated in the e-Tender. The unpriced bid is to be submitted as per scope of work and technical specification of the tender and the price bid as per the online commercial bid format. For details of submission procedure, please refer relevant para of general terms and conditions vide MM/LOCAL/E-01/2005 for E-procurement LCB tenders. Any offer not complying with the above shall be rejected straightway.

ii) Bid security:

Bid security of Rs 85,000.00 shall be submitted manually in sealed envelope superscribed with Tender no. and Bid Closing date to Chief Manager(PL), Pipeline Headquarters, Oil India Limited, Guwahati-781171, Assam on or before the Bid Closing Date and Time mentioned in the Tender. If bid security in ORIGINAL of above mentioned amount is not received within bid closing date and time , the bid submitted through electronic form will be rejected without any further consideration. For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. **The Bid Security shall be valid for 10 months from the date of bid opening**(i.e. upto 24.05.2014)

In case of extension of Bid Closing date against the tender where a bidder has already submitted his bid with requisite bid security validity within the original B.C. Date such bidders will extend validity of bid security covering the extended period of the bid closing date.

iii) Performance Bank Guarantee:

Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value.

For exemption for submission of Performance Bank Guarantee, please refer Clause No. 9.12 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement LCB Tenders. The Performance Bank Guarantee for capital nature items like plant and machinery etc. shall be valid for 12 months from the date of commissioning or 18 months from the date of despatch whichever concludes earlier. However, for consumables like chemicals, cement, tubular etc. the Performance Bank Guarantee shall be valid for 12 months from the date of despatch..

iv) The Bank Guarantee should be allowed to be encashed at all branches within India.

v) Validity of the bid shall be minimum 120 days from the Bid Closing Date.

vi) The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

vii) Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

viii) All the Bids must be Digitally Signed using #Class 3# digital certificate (e-commerce application) as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than #Class 3# digital certificate, will be rejected.

ix) C folder is meant for Technical bid only. Therefore, No price should be given in C folder, otherwise the offer will be rejected.

x) Price should be maintained in the “online price schedule” only. The price submitted other than the “online price schedule” shall not be considered.

xi) The User ID & Password are not transferable. Bids submitted by parties to whom the User ID & Password was not issued by the Company will be rejected.

xii) Conditional offers will be rejected.

xiii) Bids received in any form or media other than through OIL’s e-Procurement portal will not be accepted.

xiv) Bid documents uploaded in the e-Procurement Portal shall be typed/written and scanned clearly and contain no inter lineation, erasures or overwriting except as necessary to correct errors made by bidder. Any bid not meeting this requirement shall be rejected.

xv) Bidders must quote clearly and strictly in accordance with the price schedule outlined in #Price Schedule Format# (Annexure-5) of bidding documents, otherwise the bid will be summarily rejected. The Bids in which the rates for any part of the work are not quoted shall be rejected.

xvi) Bidder must accept and comply with the following clauses as given in the Bidding Document in toto, failing which offer will be rejected-

a. Performance Bank Guarantee clause
b. Force Majeure clause
c. Tax liabilities clause
d. Arbitration clause
e. Applicable Law
f. Liquidated Damage clause

xvii). Integrity Pact:

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL#s competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder’s authorized signatory who sign the Bid.

(C) GENERAL:

i) Annexure :- 3 & 4: The Compliance statement must be filled up by bidders and to be submitted/uploaded along with their bids. In case bidder takes exception to any clause of the bidding document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the bidder does not withdraw/modify the deviation when/as advised by Company. The loading so done by the company will be final and binding on the bidders. No deviation will, however, be accepted in the clauses covered under BRC.

ii) If any of the clauses in the BRC contradicts with other clauses of bidding document elsewhere, then the clauses in the BRC shall prevail.

2.0 BID EVALUATION CRITERIA (BEC):

A. TECHNICAL:

The bids conforming to the technical specifications, terms and conditions stipulated in the bidding document and considered to be responsive after subjecting to Bid Rejection Criteria (BRC) will be considered for further evaluation as per the Bid Evaluation Criteria given below.

i) In the event of computational error between unit rate and total price, the unit rate as quoted by the bidder shall prevail.
ii) Similarly in the event of discrepancy between words and quoted figure, words will prevail.
iii) Evaluation will be done on “total contract cost” basis to ascertain the lowest bid. (Annexure - 5)

B. COMMERCIAL:

i) To evaluate the inter-se-ranking of the offers, Assam entry tax on purchase value will be loaded as per prevailing Govt. of Assam guidelines as applicable on bid closing date.
Bidders may check this with the appropriate authority while submitting their offer.

ii) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the dead line given by the company, failing which the offer will be summarily rejected.

iii) Price bids of only those bidders will be opened whose offers are found technically acceptable. The technically acceptable bidders will be informed before opening of the #price bid#.

****

Annexure 1: Project Experience

Kindly provide relevant Project Experience of the bidders relevant past experience

Sl. No	Project	Year	Year Location of project		Size of project	Client
			Award	Completion		

Please provide proof of completed assignments

Signature: _____ **Seal:**

Full Name: _____

Address: _____

Annexure 2: Company Information

Kindly provide the following details for the Firm .

1. Name of the Firm: _____

2. Turnover in the last three audited financial years (in INR):

FY 2010-2011	FY 2011-2012	FY 2012-2013

(Please provide Published Annual Account for Balance Sheet and Profit and Loss statements as Proof)

Signature : _____ **Seal:**

Full Name : _____

Address : _____

Annexure 3: Compliance Statement for General Terms and Conditions and Special Terms and Conditions

Write "YES" If agreed and accepted otherwise write "NO" and enclose deviations with Clause No.

SECTION NO. (PAGE NO.)	CLAUSE NO. SUB-CLAUSE NO.	COMPLIANCE/ NON COMPLIANCE	REMARKS

Signature : _____ **Seal:**

Full Name : _____

Address : _____

NOTE: OIL INDIA LIMITED expects the bidders to fully accept the terms and conditions of the bid document. However, should the bidders still envisage some exceptions/ deviations to the terms and conditions of the bid document, the same should be indicated as per above format and submit along with their technical bids. If the proforma is left blank

or not submitted, then it would be construed that the bidder has not taken any exception/deviation to the terms and conditions of the bid document.

Annexure 4: Compliance Statement for Technical Specifications

Write "YES" If agreed and accepted otherwise write "NO" and enclose deviations with Clause No.

SECTION NO. (PAGE NO.)	CLAUSE NO. SUB-CLAUSE NO.	COMPLIANCE/ NON COMPLIANCE	REMARKS

Signature : _____ **Seal:**

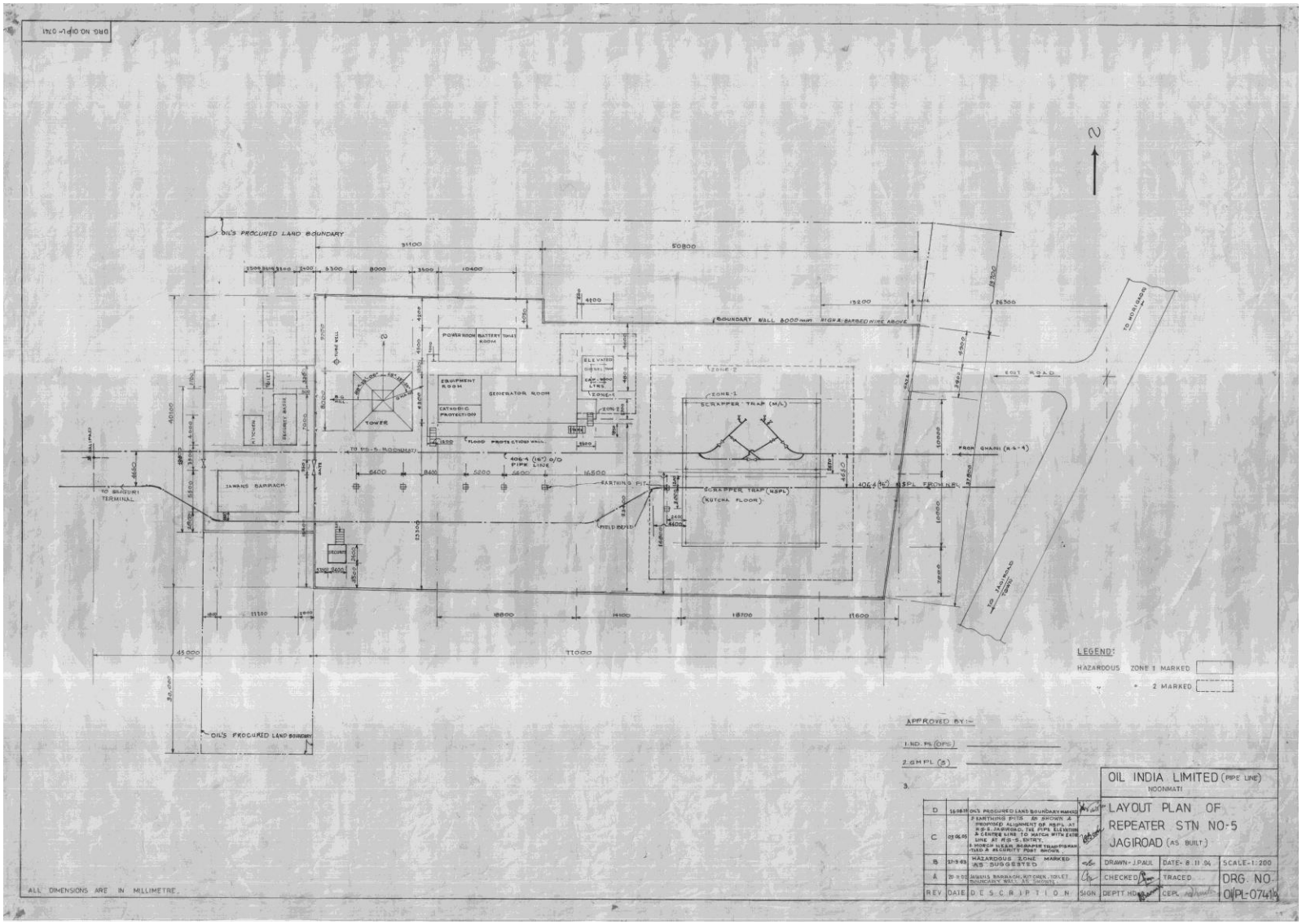
Full Name : _____

Address : _____

NOTE: OIL INDIA LIMITED expects the bidders to fully accept the terms and conditions of the bid document. However, should the bidders still envisage some exceptions/ deviations to the terms and conditions of the bid document, the same should be indicated as per above format and submit along with their technical bids. If the proforma is left blank or not submitted, then it would be construed that the bidder has not taken any exception/deviation to the terms and conditions of the bid document.

Annexure 5: PRICE BID FORMAT

BIDDING FORMAT					
DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND COMMISSIONING OF GRID CONNECTED 20 KWp OFF-GRID SOLAR PV POWER PLANT AT REPEATER STATION No.5 JAGIROAD,MARIGAON,ASSAM					
THE BIDDER SHALL READ THESE PRICE SCHEDULE / SCHEDULE OF RATES (SOR) (S) IN CONJUNCTION WITH THE SCOPE OF WORK					
ITEM. NO	DESCRIPTION	UOM	QTY	UNIT PRICE	TOTAL PRICE
				IN INR	IN INR
1	DETAILED PROJECT REPORT (DPR), DESIGN, MANUFACTURE, SUPPLY, PACKING & FORWARDING, TRANSPORTATION TO SITE OF GRID CONNECTED SOLAR PHOTOVOLTAIC POWER PLANT	LUMPSUM	1		
2	UNLOADING AT SITE, ERECTION, TESTING AND COMMISSIONING OF 100KWP SPV POWER PLANT	LUMPSUM	1		
3	COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT FOR A PERIOD OF FIVE YEARS	LUMPSUM	1		


DRG NO OIPL-0741
OIL'S PROCURED LAND BOUNDARY
51100
50800
BOUNDARY WALL 8000mm HIGH & BARBED WIRE ABOVE
POWER ROOM BATTERY TOILET ROOM
EQUIPMENT ROOM
GENERATOR ROOM
CATHODIC PROTECTION
TOWER
ZONE-1
ZONE-2
SCRAPPER TRAP (M/L)
SCRAPPER TRAP (M/SPL) (KUTCHA FLOOR)
FLOOD PROTECTION WALL
406.4 (16") O/D PIPE LINE
EARTHING PIT
FIELD BEND
JAWANS BARRACK
KITCHEN
SECURITY ROOM
TOILET
SHOWER
TO BINDURI TERMINAL
TO NTS-5 (NOONMATI)
FROM GHAPH (N.S-4)
406.4 (16") M.SPL FROM N.P.
EXIT ROAD
TO NTS-5 (NOONMATI)
TO JAGIROAD (GHAPH)
OIL'S PROCURED LAND BOUNDARY
N
LEGEND:
HAZARDOUS ZONE 1 MARKED
" " 2 MARKED
APPROVED BY:-
1. NO. PL (OPS)
2. GM PL (S)
3.
OIL INDIA LIMITED (PIPE LINE)
NOONMATI
LAYOUT PLAN OF REPEATER STN NO-5 JAGIROAD (AS BUILT)
DRAWN- J.PAUL
DATE- 8.11.04
SCALE-1:200
CHECKED
TRACED
DRG. NO.
OIPL-0741
DEPTT. HEAD
DEPL
ALL DIMENSIONS ARE IN MILLIMETRE.

Annexure- DDD

INTEGRITY PACT

Between

Oil India Limited (OIL) hereinafter referred to as "The Principal"

And

(Name of the bidder) ..... hereinafter referred to as "The Bidder/Contractor"

Preamble :

The Principal intends to award, under laid down organizational procedures, contract/s for Tender No. SGI9878P14. The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organisation "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.

2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.

3. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a Page 2 of 6 substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder/Contractor

(1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

1. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, Subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.

3. The Bidder/Contractor will not commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future Contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or risibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.

2. The Bidder accepts and undertakes to respect and uphold the Principal's Absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including

the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.

3. If the Bidder/Contractor can prove that he has restored/recouped the Damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.

4. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section 4 - Compensation for Damages

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3 % of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.

2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/Contractor/Subcontractors

1. The Bidder/Contractor undertakes to demand form all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.

2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.

3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Bidders/Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 - External Independent Monitor/Monitors (three in number depending on the size of the contract) (to be decided by the Chairperson of the Principal)

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.

3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.

4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.

6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

7. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
8. The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

Section 10 - Other provisions

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.

2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.

4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intensions.

Ms A Gogoi
Sr. Manger Materials

For the Principal

For the Bidder/Contractor

Place: Guwahati

Witness 1 : .....

Date: 18/05/2013

Witness 2 : .....